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Occupational Employment and Wages in Boston-Cambridge-Nashua — May 2020

Workers in the Boston-Cambridge-Nashua, MA-NH Metropolitan Statistical Area had an average (mean) hourly wage of $35.50 in May 2020, about 31 percent above the nationwide average of $27.07, the U.S. Bureau of Labor Statistics reported today. Regional Commissioner William J. Sibley noted that, after testing for statistical significance, wages in the local area were higher than their respective national averages in 21 of the 22 major occupational groups, including legal, management, and construction and extraction.

When compared to the nationwide distribution, Boston area employment was more highly concentrated in 9 of the 22 occupational groups, including management, computer and mathematical, and business and financial operations. Nine groups had employment shares significantly below their national representation, including transportation and material moving, production, and food preparation and serving related. (See table A.)

Table A. Occupational employment and wages by major occupational group, United States and the Boston Metropolitan Area, and measures of statistical significance, May 2020

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Boston	United States	Boston	Percent difference [1]
Total, all occupations	100.0	100.0	$27.07	$35.50*	31
Management	5.7	9.9*	60.81	71.00*	17
Business and financial operations	6.0	7.6*	38.79	44.96*	16
Computer and mathematical	3.3	5.3*	46.53	51.35*	10
Architecture and engineering	1.8	2.5*	43.41	48.43*	12
Life, physical, and social science	0.9	1.9*	38.15	45.59*	20
Community and social service	1.6	2.0*	25.09	26.18	4
Legal	0.8	1.0*	54.00	67.72*	25
Educational instruction and library	6.1	6.2	28.75	36.29*	26
Arts, design, entertainment, sports, and media	1.3	1.5*	30.96	34.90*	13
Healthcare practitioners and technical	6.2	6.7*	41.30	48.55*	18
Healthcare support	4.6	4.8	15.50	18.22*	18
Protective service	2.4	2.1*	25.11	30.09*	20
Food preparation and serving related	8.1	6.8*	13.30	16.25*	22
Building and grounds cleaning and maintenance	2.9	2.8*	15.75	19.46*	24
Personal care and service	1.9	2.0	15.68	19.74*	26
Sales and related	9.4	8.3*	22.00	27.49*	25
Office and administrative support	13.3	12.4*	20.38	24.45*	20
Farming, fishing, and forestry	0.3	[2]	16.02	18.25*	14
Construction and extraction	4.3	3.4*	25.93	33.51*	29
Installation, maintenance, and repair	3.9	2.8*	25.17	29.36*	17
Production	6.1	3.8*	20.08	22.47*	12
Transportation and material moving	8.7	6.2*	19.08	20.78*	9

Note: See footnotes at end of table.

Footnotes:
(1) A positive percent difference measures how much the mean wage in the Boston-Cambridge-Nashua, MA-NH Metropolitan Statistical Area is above the national mean wage, while a negative difference reflects a lower wage.
(2) Indicates a value of less than 0.05 percent.
* The mean hourly wage or percent share of employment is significantly different from the national average of all areas at the 90-percent confidence level.

One occupational group—management—was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Boston had 257,210 jobs in management, accounting for 9.9 percent of local area employment, significantly higher than the 5.7-percent share nationally. The average hourly wage for this occupational group locally was $71.00, significantly above the national wage of $60.81.

Some of the larger detailed occupations within the management group included general and operations managers (69,110), financial managers (29,200), and computer and information systems managers (19,320). Among the higher-paying jobs in this group were computer and information systems managers and financial managers, with mean hourly wages of $80.53 and $79.09, respectively. (See chart 1.) At the lower end of the wage scale were education and childcare administrators, preschool and daycare ($27.33) and lodging managers ($34.69). (Detailed data for the management occupations are presented in table 1; for a complete listing of detailed occupations go to https://www.bls.gov/oes/current/oes_71650.htm .)

Location quotients allow us to explore the occupational make-up of a metropolitan area by comparing the composition of jobs in an area relative to the national average. (See table 1.) For example, a location quotient of 2.0 indicates that an occupation accounts for twice the share of employment in the area than it does nationally. In the Boston area, above-average concentrations of employment were found in many of the occupations within the management group. For instance, marketing managers were employed at 3.2 times the national rate in Boston, and financial managers, at 2.4 times the U.S. average. Construction managers had a location quotient of 1.1 in Boston, indicating that this particular occupation’s local and national employment shares were similar.

These statistics are from the Occupational Employment and Wage Statistics (OEWS) survey, a federal-state cooperative program between BLS and State Workforce Agencies, in this case, the Massachusetts Division of Unemployment Assistance and the New Hampshire Department of Employment Security.

Occupational Employment and Wage Statistics (OEWS) Name Change

The Occupational Employment Statistics (OES) program has changed its name to Occupational Employment and Wage Statistics (OEWS) to better reflect the range of data available from the program. Data released on or after March 31, 2021, will reflect the new program name. Webpages, publications, and other materials associated with previous data releases will retain the Occupational Employment Statistics name.

Coronavirus (COVID-19) Impact on May 2020 Occupational Employment and Wage Statistics

Due to features of the OEWS methodology, the May 2020 OEWS estimates do not fully reflect the impact of the COVID-19 pandemic. The May 2020 OEWS estimates are based on survey panels collected for May 2020, November 2019, May 2019, November 2018, May 2018, and November 2017. Because 5 of the 6 survey panels used to produce the estimates date from before the COVID-19 pandemic, only the most recent (May 2020) survey panel reflects changes in occupational proportions related to the COVID-19 pandemic.

The May 2020 OEWS employment estimates are benchmarked to the average of May 2020 and November 2019 employment from the Quarterly Census of Employment and Wages (QCEW). Although the May 2020 QCEW data reflect the early employment effects of the COVID-19 pandemic, the November 2019 QCEW employment data precede the pandemic, and therefore do not reflect its impact.

In addition, as a result of the pandemic, response rates for the November 2019 and May 2020 panels were lower in some areas. Lower response rates may negatively affect data availability and data quality. More information is available at www.bls.gov/covid19/effects-of-covid-19-pandemic-on-occupational-employment-and-wage-statistics.htm.

Implementing the 2018 Standard Occupational Classification (SOC) System

With the May 2019 estimates, the OEWS program began implementing the 2018 Standard Occupational Classification (SOC) system. Because the May 2019 and May 2020 estimates are based on a combination of survey data collected using the 2010 SOC and survey data collected using the 2018 SOC, these estimates use a hybrid of the two classification systems that contains some combinations of occupations that are not found in either the 2010 or 2018 SOC. This is the second and final year that the hybrid occupational structure will be used. The May 2021 estimates, to be published in Spring 2022, will be the first OEWS estimates based entirely on survey data collected using the 2018 SOC. For more information on the occupational classification system used in the May 2019 and May 2020 estimates, please see www.bls.gov/oes/soc_2018.htm and www.bls.gov/oes/oes_ques.htm#qf10.

Upcoming Changes to the Occupational Employment and Wage Statistics Methodology

With the May 2021 estimates, to be released in Spring 2022, the OEWS program plans to begin using a new estimation methodology. The new model-based methodology, called MB3, has advantages over the existing methodology, as described in the Monthly Labor Review article at www.bls.gov/opub/mlr/2019/article/model-based-estimates-for-the-occupational-employment-statistics-program.htm. OEWS estimates for the years 2015-2018 were recalculated using the new estimation methodology and are available as research estimates at www.bls.gov/oes/oes-mb3-methods.htm

Technical Note

The Occupational Employment and Wage Statistics (OEWS) survey is a semiannual survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments in the United States. The OEWS data available from BLS include cross-industry occupational employment and wage estimates for the nation; over 580 areas, including states and the District of Columbia, metropolitan statistical areas (MSAs), nonmetropolitan areas, and territories; national industry-specific estimates at the NAICS sector, 3-digit, most 4-digit, and selected 5- and 6-digit industry levels, and national estimates by ownership across all industries and for schools and hospitals. OEWS data are available at www.bls.gov/oes/tables.htm.

The OEWS survey is a cooperative effort between BLS and the State Workforce Agencies (SWAs). BLS funds the survey and provides the procedures and technical support, while the State Workforce Agencies collect most of the data. OEWS estimates are constructed from a sample of about 1.1 million establishments. Each year, two semiannual panels of approximately 180,000 to 185,000 sampled establishments are contacted, one panel in May and the other in November. Responses are obtained by mail, Internet or other electronic means, email, telephone, or personal visit. The May 2020 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2020, November 2019, May 2019, November 2018, May 2018, and November 2017. The unweighted sample employment of 83 million across all six semiannual panels represents approximately 56 percent of total national employment. The overall national response rate for the six panels, based on the 50 states and the District of Columbia, is 69 percent based on establishments and 66 percent based on weighted sampled employment. The sample in the Boston-Cambridge-Nashua, MA-NH Metropolitan Statistical Area included 17,480 establishments with a response rate of 67 percent. For more information about OEWS concepts and methodology, go to www.bls.gov/oes/current/oes_tec.htm.

A value that is statistically different from another does not necessarily mean that the difference has economic or practical significance. Statistical significance is concerned with the ability to make confident statements about a universe based on a sample. It is entirely possible that a large difference between two values is not significantly different statistically, while a small difference is, since both the size and heterogeneity of the sample affect the relative error of the data being tested.

Metropolitan area definitions

The substate area data published in this release reflect the standards and definitions established by the U.S. Office of Management and Budget.

The **Boston-Cambridge-Nashua, MA-NH Metropolitan Statistical Area** includes Abington town, MA; Acton town, MA; Amesbury town, MA; Amherst town, NH; Andover town, MA; Arlington town, MA; Ashby town, MA; Ashland town, MA; Atkinson town, NH; Avon town, MA; Ayer town, MA; Bedford town, MA; Belmont town, MA; Berkley town, MA; Berlin town, MA; Beverly city, MA; Billerica town, MA; Bolton town, MA; Boston city, MA; Boxborough town, MA; Boxford town, MA; Braintree town, MA; Bridgewater town, MA; Brockton city, MA; Brookline town, MA; Brookline town, NH; Burlington town, MA; Cambridge city, MA; Canton town, MA; Carlisle town, MA; Carver town, MA; Chelmsford town, MA; Chelsea city, MA; Chester town, NH; Cohasset town, MA; Concord town, MA; Danvers town, MA; Danville town, NH; Dedham town, MA; Derry town, NH; Dighton town, MA; Dover town, MA; Dracut town, MA; Dunstable town, MA; Duxbury town, MA; East Bridgewater town, MA; East Kingston town, NH; Easton town, MA; Essex town, MA; Everett city, MA; Foxborough town, MA; Framingham town, MA; Franklin city, MA; Freetown town, MA; Fremont town, NH; Georgetown town, MA; Gloucester city, MA; Greenfield town, NH; Greenville town, NH; Groton town, MA; Groveland town, MA; Halifax town, MA; Hamilton town, MA; Hampstead town, NH; Hampton Falls town, NH; Hanover town, MA; Hanson town, MA; Harvard town, MA; Haverhill city, MA; Hingham town, MA; Holbrook town, MA; Hollis town, NH; Holliston town, MA; Hopedale town,

MA; Hopkinton town, MA; Hudson town, MA; Hudson town, NH; Hull town, MA; Ipswich town, MA; Kensington town, NH; Kingston town, MA; Kingston town, NH; Lakeville town, MA; Lawrence city, MA; Lexington town, MA; Lincoln town, MA; Litchfield town, NH; Littleton town, MA; Londonderry town, NH; Lowell city, MA; Lyndeboro town, NH; Lynn city, MA; Lynnfield town, MA; Malden city, MA; Manchester by the Sea town, MA; Mansfield town, MA; Marblehead town, MA; Marlborough city, MA; Marshfield town, MA; Mason town, NH; Maynard town, MA; Medfield town, MA; Medford city, MA; Medway town, MA; Melrose city, MA; Mendon town, MA; Merrimac town, MA; Merrimack town, NH; Methuen city, MA; Middleborough town, MA; Middleton town, MA; Milford town, MA; Milford town, NH; Millis town, MA; Milton town, MA; Mont Vernon town, NH; Nahant town, MA; Nashua city, NH; Natick town, MA; Needham town, MA; Newbury town, MA; Newburyport city, MA; Newton city, MA; Newton town, NH; Norfolk town, MA; North Andover town, MA; North Reading town, MA; Norton town, MA; Norwell town, MA; Norwood town, MA; Peabody city, MA; Pelham town, NH; Pembroke town, MA; Pepperell town, MA; Plaistow town, NH; Plymouth town, MA; Plympton town, MA; Quincy city, MA; Randolph town, MA; Raynham town, MA; Reading town, MA; Revere city, MA; Rochester town, MA; Rockland town, MA; Rockport town, MA; Rowley town, MA; Salem city, MA; Salem town, NH; Salisbury town, MA; Sandown town, NH; Saugus town, MA; Scituate town, MA; Seabrook town, NH; Sharon town, MA; Sherborn town, MA; Shirley town, MA; Somerville city, MA; South Hampton town, NH; Southborough town, MA; Stoneham town, MA; Stoughton town, MA; Stow town, MA; Sudbury town, MA; Swampscott town, MA; Taunton city, MA; Temple town, NH; Tewksbury town, MA; Topsfield town, MA; Townsend town, MA; Tyngsborough town, MA; Wakefield town, MA; Walpole town, MA; Waltham city, MA; Watertown city, MA; Wayland town, MA; Wellesley town, MA; Wenham town, MA; West Bridgewater town, MA; West Newbury town, MA; Westford town, MA; Weston town, MA; Westwood town, MA; Weymouth town, MA; Whitman town, MA; Wilmington town, MA; Wilton town, NH; Winchester town, MA; Windham town, NH; Winthrop town, MA; Woburn city, MA; and Wrentham town, MA.

For more information

Answers to frequently asked questions about the OEWS data are available at www.bls.gov/oes/oes_ques.htm. Detailed information about the OEWS program is available at www.bls.gov/oes/oes_doc.htm.

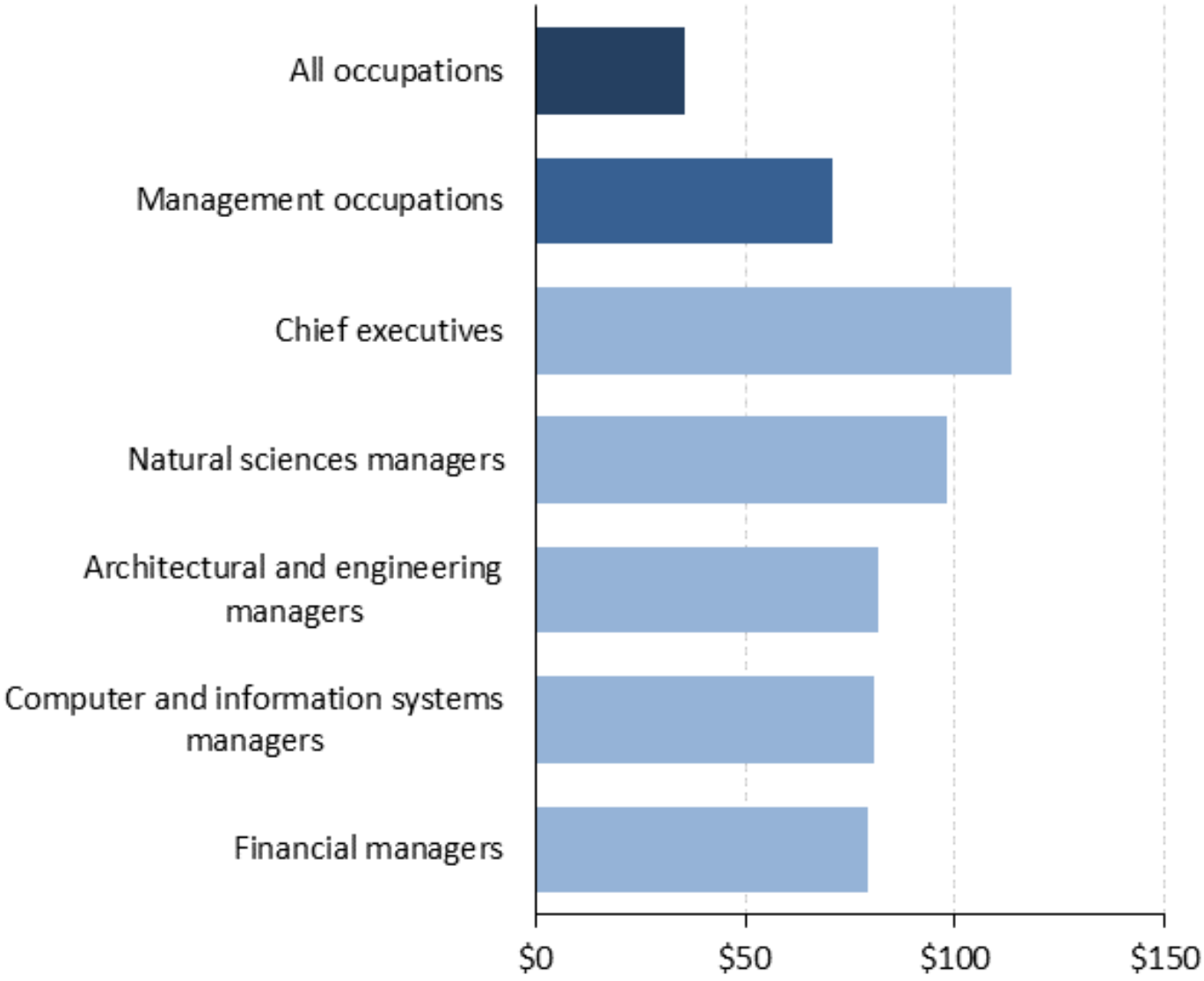
Information in this release will be made available to individuals with sensory impairments upon request. Voice phone: (202) 691-5200; Federal Relay Service: (800) 877-8339.

Table 1. Employment and wage data for management occupations, Boston Metropolitan Area, May 2020

Occupation [1]	Employment		Mean wages	
	Level [2]	Location quotient [3]	Hourly	Annual [4]
Management occupations	257,210	1.7	$71.00	$147,680
Chief executives	6,170	1.6	113.25	235,550
General and operations managers	69,110	1.6	73.18	152,210
Legislators	590	0.6	[5]	[5]
Advertising and promotions managers	900	2.1	62.45	129,890
Marketing managers	16,010	3.2	74.50	154,960
Sales managers	14,910	2.0	77.29	160,760
Public relations and fundraising managers	4,100	2.7	69.54	144,640
Administrative services and facilities managers	9,780	1.7	56.44	117,390
Computer and information systems managers	19,320	2.3	80.53	167,500
Financial managers	29,200	2.4	79.09	164,500
Industrial production managers	4,700	1.4	68.43	142,330
Purchasing managers	2,530	1.9	68.91	143,340
Transportation, storage, and distribution managers	2,460	1.0	54.09	112,500
Compensation and benefits managers	720	2.4	65.32	135,870
Human resources managers	5,660	1.9	76.72	159,580
Training and development managers	1,580	2.2	64.82	134,820
Construction managers	5,680	1.1	55.36	115,150
Education and childcare administrators, preschool and daycare	1,350	1.6	27.33	56,840
Education administrators, kindergarten through secondary	5,900	1.2	[6]	110,820
Education administrators, postsecondary	[5]	[5]	55.62	115,690
Education administrators, all other	850	1.0	48.14	100,130
Architectural and engineering managers	7,940	2.2	81.46	169,440
Food service managers	4,300	1.2	35.64	74,130
Lodging managers	[5]	[5]	34.69	72,160
Medical and health services managers	13,010	1.7	68.76	143,020
Natural sciences managers	3,660	2.6	97.99	203,820
Postmasters and mail superintendents	170	0.7	41.25	85,800
Property, real estate, and community association managers	4,140	1.0	44.58	92,720
Social and community service managers	4,790	1.6	36.17	75,230
Emergency management directors	100	0.5	49.82	103,620
Funeral home managers	180	1.0	48.31	100,490
Personal service managers, all other; entertainment and recreation managers, except gambling; and managers, all other	6,760	0.8	67.33	140,050

Footnotes:
(1) For a complete listing of all detailed occupations in the Boston-Cambridge-Nashua, MA-NH Metropolitan Statistical Area, see www.bls.gov/oes/current/oes_71650.htm
(2) Estimates for detailed occupations may not sum to the totals due to rounding, and because the totals may include occupations that are not shown separately. Estimates do not include self-employed workers.
(3) The location quotient is the ratio of the area concentration of occupational employment to the national average concentration. A location quotient greater than one indicates the occupation has a higher share of employment than average, and a location quotient less than one indicates the occupation is less prevalent in the area than average.
(4) Annual wages have been calculated by multiplying the hourly mean wage by a "year-round, full-time" hours figure of 2,080 hours; for those occupations where there is not an hourly mean wage published, the annual wage has been directly calculated from the reported survey data.
(5) Estimate not released.
(6) Wages for some occupations that do not generally work year-round, full time, are reported either as hourly wages or annual salaries depending on how they are typically paid.

Chart 1. Hourly mean wages for higher paying management occupations in the Boston metropolitian area, May 2020



Source: U.S. Bureau of Labor Statistics.